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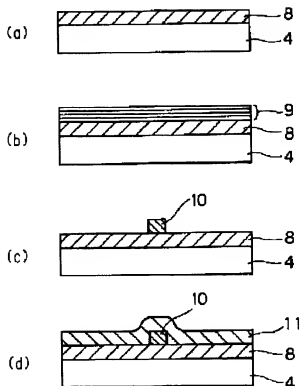
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INVENTOR : HOSHINO SUMIO;

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TITLE : PRODUCTION OF OPTICAL
WAVEGUIDE



ABSTRACT : PURPOSE: To provide a method for producing an optical waveguide by which the waveguide can be doped with a functional substance at a high concn.

CONSTITUTION: A 1st cladding material having a softening point close to a heating temp. at which the cladding material becomes transparent glass is deposited on a substrate 4 by a sol-gel process and a lower cladding part 8 is formed by converting the cladding material into transparent glass. A thin film doped with a rare earth element as a functional substance is then laminated on the lower cladding part 8 by a sol-gel process to form a core part 10. A 2nd cladding material having a softening point close to a heating temp. at which the cladding material becomes transparent glass is further deposited by a sol-gel process on the lower cladding part 8 with the formed core part 10 and an upper cladding part 11 is formed by converting the cladding material into transparent glass.

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